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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,096	04/12/2004	Randall Shoup	ORCL.P0036C2	3157
23349	7590	07/18/2005	EXAMINER	
STATTLER JOHANSEN & ADELI P O BOX 51860 PALO ALTO, CA 94303			DODDS, HAROLD E	
			ART UNIT	PAPER NUMBER
			2167	

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,096

Applicant(s)

SHOUP ET AL.

Examiner

Harold E. Dodds, Jr.

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-26 and 33-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-26 is/are allowed.
- 6) ☒ Claim(s) 33 and 35-41 is/are rejected.
- 7) ☒ Claim(s) 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/1/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1A, 1B, 2, and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. The applicant should submit the set of drawings used for U.S. Patent No. 6,735,590.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 33 and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liddy et al (U.S. Patent No. 6,628,312), Crandall et al. (U.S. Patent No. 5,390,296) and Gilbert et al. (U.S. Patent No. 5,450,313).

5. Liddy renders obvious independent claim 33 as follows:
“...generating a record structure foundation...” at col. 2, lines 61-65 and col. 15, lines 44-52.

“...from the record structure foundation...” at col. 15, lines 44-52.

Liddy does not teach the use of a multi-dimensional view and a layout mapping of cells.

6. However, Crandall teaches the use of a multi-dimensional view as follows:

"...into a multi-dimensional view..." at col. 4, lines 27-29.

It would have been obvious to one of ordinary skill at the time of the invention to combine Crandall with Liddy to use multi-dimensional views in order to permit users to visualize multi-dimensional data structures and be able to visualize the relationships between components of the data structure. Liddy and Crandall teach related applications. They teach the use of computers, the use of databases, the use of multidimensional space, the use of records, the use of fields, the use of objects, the use of structures, and the storage of information. Liddy provides record structure foundations and Crandall provides multi-dimensional views.

Crandall does not teach the use of a layout mapping of cells.

7. However, Gilbert teaches the use of a layout mapping of cells as follows: "...generating a layout mapping of cells..." at col. 8, lines 18-22, col. 8, lines 65-68, and col. 9, line 1.

"...and converting the layout mapping of cells..." at col. 7, lines 62-66, col. 8, lines 65-68, and col. 9, line 1.

It would have been obvious to one of ordinary skill at the time of the invention to combine Gilbert with Liddy and Crandall to use the layout mapping of cells in order to assist in the generation of code for computers having distribute memory and parallel processors and thus providing the processors with enhanced multi-dimensional capabilities. Liddy, Crandall, and Gilbert teach related applications. They teach the use of computers, the use of networks, the use of multidimensional space, the use of arrays, the use of objects, and the storage of information and Liddy and Gilbert teach the use of

networks and the use of indexes. Liddy provides record structure foundations, Crandall provides multi-dimensional views, and Gilbert provides the layout mapping of cells.

8. As per claim 36, the "...mufti-dimensional view...", is taught by Crandall at col. 4, lines 27-29,
the "...includes a number of measure cells...", is taught by Liddy at col. Col. 26, lines 15-21 and col. 14, lines 38-40,
the "...and a number of dimension values associated with each of the dimension objects...", is taught by Crandall at col. 16, lines 24-26, col. 16, lines 54-62 and col. 14, lines 36-39,
the "...and where the number of measure cells is less than the product...", is taught by Liddy at col. 26, lines 15-21, col. 14, lines 38-40, col. 21, lines 4-6, and col. 22, lines 7-10,
and the "...of the number of dimension values associated with each of the dimension objects...", is taught by Crandall at col. 16, lines 24-26, col. 16, lines 54-62, and col. 14, lines 36-39.

9. As per claim 37, the "...mufti-dimensional view...", is taught by Crandall at col. 4, lines 27-29,
the "...includes at least one dimension value associated with one dimension object...", is taught by Crandall at col. 16, lines 24-26, col. 16, lines 54-62, and col. 14, lines 36-39,
the "...being represented on an axis...", is taught by Gilbert at col. 5, lines 28-30,

the "...and includes at least one unique pair of measure cells...", is taught by Liddy at col. 24, lines 20-22, col. 15, lines 26-29, col. 26, lines 15-21, and col. 14, lines 38-40, the "...associated with dimension values...", is taught by Crandall at col. 16, lines 24-26 and col. 16, lines 54-62,

the "...and if a dimension value associated with one dimension object...", is taught by Crandall at col. 16, lines 24-26, col. 16, lines 54-62, and col. 14, lines 36-39,

the "...being represented on an axis...", is taught by Gilbert at col. 5, lines 28-30,

the "...does not coexist...", is taught by Liddy at col. 19, lines 63-65 and col. 19, lines 40-45,

the "...with another dimension value associated with another dimension object...", is taught by Crandall at col. 16, lines 24-26, col. 16, lines 54-62, and col. 14, lines 36-39,

the "...being represented on the same axis...", is taught by Gilbert at col. 5, lines 28-30,

the "...then not forming that unique pair of measure cells...", is taught by Liddy at col.

24, lines 20-22, col. 15, lines 26-29, col. 26, lines 15-21, and col. 14, lines 38-40,

and the "...as part of the multidimensional view...", is taught by Crandall at col. 10, 37-39 and col. 4, lines 27-29.

10. As per claim 38, the "...mufti-dimensional view...", is taught by Crandall at col. 4, lines 27-29,

and the "...does not include at least one of any extraneous cells and unnecessary cell locations...", is taught Liddy at col. 24, lines 6-10, col. 14, lines 38-40, col. 19, lines 24-25, and col. 16, lines 6-8.

11. As per claim 39, the "...mufti-dimensional view...", is taught by Crandall at col. 4, lines 27-29,
the "...is based on records from a first query..." is taught by Liddy at col. 15, lines 44-52
and col. 16, lines 63-65,
the "...receiving records from a second query...", is taught by Liddy at col. 15, lines 44-52 and col. 5, lines 45-50,
the "...updating the record structure foundation...", is taught by Liddy at col. 11, lines 58-59 and col. 15, lines 65-68,
the "...with information from the second query...", is taught by Liddy at col. 12, lines 2-5 and col. 5, lines 45-50,
the "...and information from the records from the second query...", is taught by Liddy at col. 12, lines 2-5, col. 15, lines 44-52, and col. 5, lines 45-50,
the "...generating an updated layout mapping of cells...", is taught by Gilbert at col. 8, lines 18-22, col. 4, lines 45-58, col. 8, lines 65-68, and col. 9, line 1,
the "...from the updated record structure foundation...", is taught by Liddy at col. 11, lines 58-59 and col. 15, lines 65-68,
the "...and converting the updated layout mapping of cells...", is taught by Gilbert at col. 7, lines 62-66, col. 4, lines 45-58, col. 8, lines 65-68, and col. 9, line 1,
and the "...into a multi-dimensional view...", is taught by Crandall at col. 9, lines 13-25.

12. As per claim 40, the "...multi-dimensional view...", is taught by Crandall at col. 4, lines 27-29,

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the "...includes a first axis and a second axis..." is taught by Gilbert at col. 5, lines 28-30,

the "...where converting the layout mapping of cells..." is taught by Gilbert at col. 7, lines 62-66, col. 8, lines 65-68, and col. 9, line 1,

the "...into a multi-dimensional view..." is taught by Crandall at col. 4, lines 27-29,

the "...includes displaying a first dimension object on the first axis..." is taught by Gilbert at col. 9, lines 38-40, col. 5, lines 55-56, and col. 5, lines 28-30,

the "...displaying a second dimension object on the second axis..." is taught by Gilbert at col. 9, lines 38-40, col. 5, lines 55-56, and col. 5, lines 28-30,

the "...and where the first dimension object..." is taught by Gilbert at col. 55-56 and col. 5, lines 28-30,

the "...is hierarchically related..." is taught by Liddy at col. 25, lines 14-17,

and the "...to the second dimension object..." is taught by Gilbert at col. 55-56 and col. 5, lines 28-30.

13. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liddy, Crandall, and Gilbert as applied to claim 33 above, and further in view of Marsh et al. (U.S. Patent No. 5,930,831).

As per claim 35, the "...record structure foundation storage unit..." is taught by Liddy at col. 2, lines 61-65 and col. 15, lines 44-52,
the "...where generating a multi-dimensional record structure foundation..." is taught by Liddy at col. 2, lines 61-65, col. 23, lines 23-28, and col. 15, lines 44-52,

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the "...and a first query-record identifier...", is taught by Liddy at col. 16, lines 63-65 and col. 15, lines 44-52,

the "...and a second query-record identifier...", is taught by Liddy at col. 16, lines 63-65 and col. 15, lines 44-52,

the "...first dimension index record...", is taught by Liddy at col. 31, lines 42-45, col. 32, lines 54-56, and col. 15, lines 44-52,

the "...and the first query-record identifier...", is taught by Liddy at col. 16, lines 63-65 and col. 15, lines 44-52,

the "...exists in the first dimension index record...", is taught by Liddy at col. 19, lines 63-66, col. 31, lines 42-45, col. 32, lines 54-56, and col. 15, lines 44-52,

the "...then creating a second dimension index record...", is taught by Liddy at col. 31, lines 42-45, col. 31, lines 42-45, col. 32, lines 54-56, and col. 15, lines 44-52,

the "...does not exist in the first dimension index record...", is taught by Liddy at col. 19, lines 63-66, col. 31, lines 42-45, col. 32, lines 54-56, and col. 15, lines 44-52,

the "...and the second query-record identifier...", is taught by Liddy at col. 16, lines 63-65 and col. 15, lines 44-52,

the "...exists in the first dimension index record...", is taught by Liddy at col. 19, lines 63-66, col. 31, lines 42-45, col. 32, lines 54-56, and col. 15, lines 44-52,

the "...then adding to the first dimension index record...", is taught by Liddy at col. 31, lines 39-40, col. 31, lines 42-45, col. 32, lines 54-56, and col. 15, lines 44-52,

the "...the second query-record identifier...", is taught by Liddy at col. 16, lines 63-65 and col. 15, lines 44-52,

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but the "...includes a master table index storage unit...,"

the "...and a master table storage unit...,"

the "...includes updating the master table index storage unit...,"

the "...and where updating the master table index storage unit includes...,"

the "... (a) presenting in the master table storage unit...,"

the "...first master table record...," i

the "...and a second master table record...,"

the "...where the first master table record includes a first master table record dimension value...,"

the "...that identifies the first master table record...,"

the "...and where the second master table record includes a second master table record dimension value...,"

the "...that identifies the second master table record...,"

the "... (b) presenting in the master table index storage unit...,"

the "...that includes the first master table record dimension value...,"

the "... (c) selecting the second master table record...,"

the "... (d) determining whether the second master table record dimension value...,"

the "...and (e)(1) if the second master table record dimension value...,"

the "...that includes the second master table record dimension value...,"

and the "...and (e)(2) if the second master table record dimension value...," are not

taught by either Liddy, Crandall, or Gilbert.

However, Marsh teaches the use of master tables, records, indexes, and storage units as follows:

"...For each file in the master file table..." at col. 9, line 57.

"...If the new run map is too large for the current MFT File Record for the file, including all of its extensions..." at col. 10, lines 12-13.

"...UCHAR ucXPartIndex; // Index into partition table..." at col. 12, line 44.

"...The system 60 includes at least one computer 62 which has a processor 64 for executing instructions, a memory 66 for storing instructions, and a partitionable storage medium 68 for holding data in sectors according to the partition table 32 (FIG. 2)..." at col. 7, lines 14-18.

It would have been obvious to one of ordinary skill at the time of the invention to combine Marsh with Liddy, Crandall, and Gilbert to use master files in order to assist in the portioning of the mass storage area for the multidimensional database. Liddy, Crandall, Gilbert, and Match teach related applications. They teach the use of computers, the use of arrays, and the storage of information and Liddy, Gilbert and Marsh teach the use of networks and the use of indexes. Liddy provides record structure foundations, Crandall provides multi-dimensional views, Gilbert provides the layout mapping of cells, and Marsh provides master tables.

14. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liddy, Crandall, and Gilbert as applied to claim 33 above, and further in view of Noble et al. (U.S. Patent No. 5,634,053).

As per claim 41, the "...coupled to the processing engine..." is taught by Liddy at col. 19, lines 23-25,

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the "...does not include any rules specifying hierarchical relationships...", is taught by Liddy at col. 19, lines 45-49 and col. 9, lines 62-64,

the "...between different dimension objects and their respective dimension values...", is taught by Crandall at col. 5, lines 35-37, col. 16, lines 24-26, col. 16, lines 54-62, and col. 14, lines 36-39,

the "...prior to generating the layout mapping of cells...", is taught by Gilbert at col. 8, lines 18-22, col. 8, lines 65-68, and col. 9, line 1,

the "...from the record structure foundation...", is taught by Liddy at col. 2, lines 61-65, but the "...the record management system...",

the "...further includes a meta-data storage unit...",

and the "...and where the meta-data storage unit...", are not taught by either Liddy, Crandall, or Gilbert.

However, Noble teaches the use of record manage systems and the use of metadata as follows:

"...The present invention allows multiple users to access through a global query geographically dispersed and heterogeneous information management systems or Relational DataBase Management Systems (RDBMS)..." at col. 4, lines 24-27.

"...The FIM architecture 10 includes a Smart Data Dictionary (SDD) server 18 that contains meta-data information for each of the RDBMSs 14 and the virtual database such as: schema; data distribution; sites configuration including data field formats; domain knowledge; and, inter-site relationships..." at col. 6, lines 14-19.

It would have been obvious to one of ordinary skill at the time of the invention to combine Noble with Liddy, Crandall, and Gilbert to use record operating systems in

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order to use standard software processing systems to access databases and gain greater acceptance of the system by potential users. Likewise, it would have been obvious to one of ordinary skill at the time of the invention to combine Noble with Liddy, Crandall, and Gilbert to use metadata in order to identify the characteristics of data fields by using commonly available software. Liddy, Crandall, Gilbert, and Noble teach related applications. They teach the use of computers, the use of multidimensional space, the use of arrays, the use of objects, and the storage of information and Liddy, Gilbert, and Noble teach the use of networks and the use of indexes. Liddy provides record structure foundations, Crandall provides multi-dimensional views, Gilbert provides the layout mapping of cells, and Noble provides record operating systems and metadata.

Allowable Subject Matter

15. Claims 18-26 are allowed. No prior has been found that anticipates or renders obvious the limitation " a processing engine to generate a record structure foundation from the data, where the record structure foundation includes at least one query map and at least one dimension index record".

16. Claim 34 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harold E. Dodds, Jr. whose telephone number is (571)-272-4110. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571)-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harold E. Dodds, Jr.

Harold E. Dodds, Jr.
Patent Examiner
July 13, 2005


GRETA ROBINSON
PRIMARY EXAMINER